

TC12K192

Telecentric lens for 12k and 16k linescan cameras, magnification 0.320 x, M72 x 0.75 mount

SPECIFICATIONS

Magnification	(x)	0.320
Image circle Ø	(mm)	62.4

Object field of view

with line - 12k detector 12k x 5.2 µm	(mm)	195.3
with line - 12k detector 12k x 5 µm	(mm)	192.3
with line - 16k detector 16k x 3.5 µm	(mm)	179.4
with line - 8k detector 8k x 7.5 µm	(mm)	179.4

Optical specifications

Working distance (1)	(mm)	265.5
wF/# (2)		16
Telecentricity typical (max) (3)	(deg)	< 0.06 (0.08)
Distortion typical (max) (4)	(%)	< 0.08 (0.10)
Field depth (5)	(mm)	10
CTF@ 70 lp/mm	(%)	> 35

Mechanical specifications

Length (6)	(mm)	857.5
Diameter	(mm)	260
Mass	(g)	15000
Mount (7)		M72x0.75 FD6.56

Last update: 2019-06-17

NOTES

- Working distance: distance between the front lens and the object. Set this distance within +/- 3% of the nominal value for maximum resolution and minimum distortion
- Working F-number (wF/#): the real F-number of a lens when used as a macro. Lenses with smaller apertures can be supplied on request
- Maximum slope of principal rays inside the lens: when converted to milliradians, it gives the maximum measurement error for any millimeter of object displacement
- Percent deviation of the real image compared to an ideal, undistorted image: typical (average production) values and maximum (guaranteed) values are listed.
- At the borders of the field depth the image can be still used for measurement but, to get a very sharp image, only half of the nominal field depth should be considered. Pixel size used for calculation is 7 µm.
- Indicates the availability of an integrated camera phase adjustment feature.
- Measured from the front end of the mechanics to the camera flange.
- FD stands for Flange Distance (in mm), defined as the distance from the mounting flange (the "metal ring" in rear part of the lens) to the camera detector plane.

COMPATIBLE PRODUCTS

Despite the efforts made to generate an error-free compatibility list, we always recommend to consult the Opto Engineering® technical support department before purchasing a compatible product. Opto Engineering® shall not be liable for any damage or malfunctioning caused by the incorrect selection of a compatible product.



LTCLHP series

High-performance telecentric illuminators

LTCLHP192-R	Telecentric HP illuminator, beam diameter 250 mm, red
LTCLHP192-G	Telecentric HP illuminator, beam diameter 250 mm, green
LTCLHP192-W	Telecentric HP illuminator, beam diameter 250 mm, white



LTCLHP CORE series



All product specifications and data are subject to change without notice to improve reliability, functionality, design or other. Photos and pictures are for illustration purposes only.

LTCLCR064-R Telecentric CORE illuminator, beam dimensions $\varnothing = 86$; $x = 67$, red



LTBRDC series

Continuous LED bar lights

LTZPFL200-00-6-W-24V LED bar light, 6 LED rows, 200X26.3 illumination area, white, 24V

LTZPFL200-00-6-R-24V LED bar light, 6 LED rows, 200X26.3 illumination area, red, 24V

LTZPFL200-00-6-G-24V LED bar light, 6 LED rows, 200X26.3 illumination area, green, 24V

LTZPFL200-00-6-B-24V LED bar light, 6 LED rows, 200X26.3 illumination area, blue, 24V



LTLNC series

Continuous LED line lights

LTLNC100-W LED line light 100 mm, white

LTLNC100-R LED line light 100 mm, red

LTLNC100-G LED line light 100 mm, green

LTLNC100-B LED line light 100 mm, blue

LTLNC100-IR850 LED line light 100 mm, IR 850 nm

LTLNC150-W LED line light 150 mm, white

LTLNC150-R LED line light 150 mm, red

LTLNC150-G LED line light 150 mm, green

LTLNC150-B LED line light 150 mm, blue

LTLNC150-IR850 LED line light 150 mm, IR 850 nm

LTLNC200-W LED line light 200 mm, white

LTLNC200-R LED line light 200 mm, red

LTLNC200-G LED line light 200 mm, green

LTLNC200-B LED line light 200 mm, blue

LTLNC200-IR850 LED line light 200 mm, IR 850 nm

LTLNC300-W LED line light 300 mm, white

LTLNC300-R LED line light 300 mm, red

LTLNC300-G LED line light 300 mm, green

LTLNC300-B LED line light 300 mm, blue

LTLNC300-IR850 LED line light 300 mm, IR 850 nm



LTLNM series

Flicker free high power focused modular LED line lights

LTLNM-0200-N-FC-W Modular LED line light, 200mm length, near field focusing, fan cooling, white

LTLNM-0200-N-D-FC-W Modular LED line light, 200mm length, near field focusing, diffuser, fan cooling, white

LTLNM-0200-F-FC-W Modular LED line light, 200mm length, far field focusing, fan cooling, white

LTLNM-0200-F-D-FC-W Modular LED line light, 200mm length, far field focusing, diffuser, fan cooling, white

LTLNM-0200-C-FC-W Modular LED line light, 200mm length, collimated, fan cooling, white

LTLNM-0200-C-D-FC-W Modular LED line light, 200mm length, collimated, diffuser, fan cooling, white

LTLNM-0400-N-FC-W Modular LED line light, 400mm length, near field focusing, fan cooling, white

LTLNM-0400-N-D-FC-W Modular LED line light, 400mm length, near field focusing, diffuser, fan cooling, white

LTLNM-0400-F-FC-W Modular LED line light, 400mm length, far field focusing, fan cooling, white

LTLNM-0400-F-D-FC-W Modular LED line light, 400mm length, far field focusing, diffuser, fan cooling, white

LTLNM-0400-C-FC-W Modular LED line light, 400mm length, collimated, fan cooling, white

LTLNM-0400-C-D-FC-W Modular LED line light, 400mm length, collimated, diffuser, fan cooling, white

LTLNM-0600-N-FC-W Modular LED line light, 600mm length, near field focusing, fan cooling, white

LTLNM-0600-N-D-FC-W Modular LED line light, 600mm length, near field focusing, diffuser, fan cooling, white

LTLNM-0600-F-FC-W Modular LED line light, 600mm length, far field focusing, fan cooling, white

LTLNM-0600-F-D-FC-W Modular LED line light, 600mm length, far field focusing, diffuser, fan cooling, white

LTLNM-0600-C-FC-W Modular LED line light, 600mm length, collimated, fan cooling, white

LTLNE-300-N-D-PC-W	LED line light, direct, 300mm length, near field focusing, diffuser, passive cooling, white
LTLNE-300-N-D-FC-W	LED line light, direct, 300mm length, near field focusing, diffuser, fan cooling, white
LTLNE-300-F-PC-W	LED line light, direct, 300mm length, far field focusing, passive cooling, white
LTLNE-300-F-FC-W	LED line light, direct, 300mm length, far field focusing, fan cooling, white
LTLNE-300-F-D-PC-W	LED line light, direct, 300mm length, far field focusing, diffuser, passive cooling, white
LTLNE-300-F-D-FC-W	LED line light, direct, 300mm length, far field focusing, diffuser, fan cooling, white
LTLNE-300-C-PC-W	LED line light, direct, 300mm length, collimated, passive cooling, white
LTLNE-300-C-FC-W	LED line light, direct, 300mm length, collimated, fan cooling, white
LTLNE-300-C-D-PC-W	LED line light, direct, 300mm length, collimated, diffuser, passive cooling, white
LTLNE-300-C-D-FC-W	LED line light, direct, 300mm length, collimated, diffuser, fan cooling, white
LTLNE-300-CX-N-PC-W	LED line light, coaxial, 300mm length, near field focusing, passive cooling, white
LTLNE-300-CX-N-FC-W	LED line light, coaxial, 300mm length, near field focusing, fan cooling, white
LTLNE-300-CX-N-D-PC-W	LED line light, coaxial, 300mm length, near field focusing, diffuser, passive cooling, white
LTLNE-300-CX-N-D-FC-W	LED line light, coaxial, 300mm length, near field focusing, diffuser, fan cooling, white
LTLNE-300-CX-F-PC-W	LED line light, coaxial, 300mm length, far field focusing, passive cooling, white
LTLNE-300-CX-F-FC-W	LED line light, coaxial, 300mm length, far field focusing, fan cooling, white
LTLNE-300-CX-F-D-PC-W	LED line light, coaxial, 300mm length, far field focusing, diffuser, passive cooling, white
LTLNE-300-CX-F-D-FC-W	LED line light, coaxial, 300mm length, far field focusing, diffuser, fan cooling, white
LTLNE-300-CX-C-PC-W	LED line light, coaxial, 300mm length, collimated, passive cooling, white
LTLNE-300-CX-C-FC-W	LED line light, coaxial, 300mm length, collimated, fan cooling, white
LTLNE-300-CX-C-D-PC-W	LED line light, coaxial, 300mm length, collimated, diffuser, passive cooling, white
LTLNE-300-CX-C-D-FC-W	LED line light, coaxial, 300mm length, collimated, diffuser, fan cooling, white
LTLNE-300-MR-N-PC-W	LED line light, 45° mirror, 300mm length, near field focusing, passive cooling, white
LTLNE-300-MR-N-FC-W	LED line light, 45° mirror, 300mm length, near field focusing, fan cooling, white
LTLNE-300-MR-N-D-PC-W	LED line light, 45° mirror, 300mm length, near field focusing, diffuser, passive cooling, white
LTLNE-300-MR-F-PC-W	LED line light, 45° mirror, 300mm length, far field focusing, passive cooling, white
LTLNE-300-MR-F-FC-W	LED line light, 45° mirror, 300mm length, far field focusing, fan cooling, white
LTLNE-300-MR-F-D-PC-W	LED line light, 45° mirror, 300mm length, far field focusing, diffuser, passive cooling, white
LTLNE-300-MR-F-D-FC-W	LED line light, 45° mirror, 300mm length, far field focusing, diffuser, fan cooling, white
LTLNE-300-MR-C-PC-W	LED line light, 45° mirror, 300mm length, collimated, passive cooling, white
LTLNE-300-MR-C-FC-W	LED line light, 45° mirror, 300mm length, collimated, fan cooling, white
LTLNE-300-MR-C-D-PC-W	LED line light, 45° mirror, 300mm length, collimated, diffuser, passive cooling, white
LTLNE-300-MR-C-D-FC-W	LED line light, 45° mirror, 300mm length, collimated, diffuser, fan cooling, white



CMHO series

Clamping mechanics

CMHO192R Clamping mechanics for TCxx192 lenses and LTCLHP192-X illuminators rotation type



COE HR LS series

57.3 mm line scan CMOS sensors for high-speed scanning

COE8KLSMCL-G Camera CMOS, Camera Link, 8192 x 1, monochrome, 77kfp, G mount

COE16KLSMCL-G Camera CMOS, Camera Link, 16384 x 1, monochrome, 55kfp, G mount